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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,415	06/05/2001	Peter James Sutherland Goldsack	B-4199 618841-6	8918

7590

08/16/2004

Richard P. Berg
c/o Ladas & Parry
21st Floor
5670 Wilshire Boulevard
Los Angeles, CA 90036

EXAMINER

TORRES, JOSEPH D

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/875,415

Applicant(s)

GOLDSACK ET AL.

Examiner

Joseph D. Torres

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "opening and maintaining an information block flow by sending repeated message blocks..." The Examiner asserts that the emphasis provided by the Applicant makes apparent that the intended interpretation of language is: opening and maintaining an information block flow whereby the information block flow is maintained by sending repeated message blocks. The Examiner asserts that the language has two other interpretations: 1. opening and maintaining an information block flow whereby the information block flow is opened by sending repeated message blocks, or 2. opening and maintaining an information block flow whereby the information block flow is opened by sending repeated message blocks and the information block flow is also maintained by sending repeated message blocks. As such, claim 1 is ambiguous and does not warrant the Applicant's suggested interpretation in the Applicant's amendment A of Paper No. 5. **From the language, it is not clear whether an information block flow**

is opened “by sending repeated message blocks”, whether an information block flow is maintained “by sending repeated message blocks” or both.

Claims 4, 12, 17, 19 and 21 recites, “GMM_INFORMATION”, which is undefined.

Claims 7, 15, 17, 19 and 21 recites, “GRR_DATA_REQ”, which is undefined.

Claims 2-8 depend from claim 1, hence inherit the deficiencies of claim 1.

Claims 9, 17 and 20-22 recite similar language as in claim 1.

Claims 10-16, 18 and 19 depend from respective claims 9 and 17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1, 2, 9, 10 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato, Tsuyoshi (US 5592468 A) in view of Ejzak; Richard P. et al. (US 5444718 A, hereafter referred to as Ejzak).

35 U.S.C. 103(a) rejection of claims 1, 9, 20 and 22.

Sato teaches a method of making block error rate measurements (col. 18, lines 10-28, Sato; Note: in the equation $R = Ax\alpha + C$, C is defined as β/L where L is a sum of packet lengths of ACK-ed first frames in experienced transmissions after a past transmission or a sum of packet lengths of all first frames in the experienced transmissions per a sum of packet lengths of NAK-ed first frames in the experienced transmissions, whichever is smaller, hence L is a measure of frame or block error rate and R is a means of taking weighted averages of past block error rates with current block error rates, hence is also a block error rate; Note: L is a block length) in a layered protocol communications system (col. 1, lines 15-31, Sato), comprising the steps of: opening and maintaining an information block flow by sending message blocks which are defined at a selected layer in the protocol stack below the topmost layer (col. 1, lines 15-31 in Sato teach that MAC protocol data units called "data frames" or simply "frames" are used to open and maintain information block flow by sending message blocks which are defined at a the MAC protocol data layer in the protocol stack below the topmost layer; Note: the data link layer at which the MAC protocol data layer resides is well below the topmost application layer in the networking protocol stack); monitoring ack/nack messages sent in response to the message blocks to determine whether the message blocks have been correctly transported (col. 18, lines 10-28 in Sato teach that ack/nack messages sent in response to the message blocks to determine whether the message blocks have been correctly transported are monitored to determine the block error rate; see Figure

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11 in Sato, also); and calculating said block error rate measurements based at least in part on the monitored ack/nack messages. (col. 18, lines 10-28, Sato; Note: in the equation $R = Ax\alpha + C$, C is defined as β/L where L is a sum of packet lengths of ACK-ed first frames in experienced transmissions after a past transmission or a sum of packet lengths of all first frames in the experienced transmissions per a sum of packet lengths of NAK-ed first frames in the experienced transmissions, whichever is smaller, hence L is a measure of frame or block error rate and R is a means of taking weighted averages of past; Note: col. 18, lines 20-25 in Sato teach L is a sum of packet lengths of ACK-ed first frames in experienced transmissions after a past transmission or a sum of packet lengths of all first frames in the experienced transmissions per a sum of packet lengths of NAK-ed first frames in the experienced transmissions, whichever is smaller). In addition, Sato teaches that the LAN system conforms to an authorized protocol standard such as OSI (see col. 13, lines 18-21 and col.1, lines 15-31 in Sato). However Sato does not explicitly teach the specific use of opening and maintaining an information block flow by sending repeated message blocks, which are defined at a selected layer in the protocol stack below the topmost layer.

Ejzak, in an analogous art, teaches opening and maintaining an information block flow by sending repeated message blocks which are defined at a selected layer in the protocol stack below the topmost layer (see Abstract, Ejzak).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sato with the teachings of Ejzak by including use of opening and maintaining an information block flow by sending repeated message

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blocks which are defined at a selected layer in the protocol stack below the topmost layer. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of opening and maintaining an information block flow by sending **repeated** message blocks which are defined at a selected layer in the protocol stack below the topmost layer would have provided the opportunity to increase throughput (see col. 1, lines 34-42 in Ejzak).

35 U.S.C. 103(a) rejection of claims 2 and 10.

MPEP § 2131.01(III) teaches Extra Reference or Evidence Can Be Used To Show an Inherent Characteristic of the Thing Taught by the Primary Reference

“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). The Examiner introduces Matsunaga, Yasuhiko et al. (US 6532233 B1, hereafter referred to as Matsunaga) and Reference 1 (http://www.webopedia.com/quick_ref/OSI_Layers.asp, The 7 Layers of the OSI Model) as a teaching references. Note: the Matsunaga patent and Reference 1 are **not** being introduced as Prior Art references, but are being introduced as teaching references for that which is inherent in the art. Sato teaches

MAC protocol which exists in the data link layer along with the logical link layer (see Figure 2 in Sato and Reference 1). Note in col. 5, lines 7-15, Matsunaga teaches that it is a function of a layer-2 protocol, i.e., a data link layer protocol, called the Logical Link Control (LLC) layer to discard erred framed, hence error detection code is a predetermined characteristic that causes the message blocks to be discarded upon processing at a selected protocol layer, the data link layer protocol, in a communications unit receiving the message blocks.

35 U.S.C. 103(a) rejection of claims 17 and 21.

Sato teaches a method of making block error rate measurements (col. 18, lines 10-28, Sato; Note: in the equation $R = Ax\alpha + C$, C is defined as β/L where L is a sum of packet lengths of ACK-ed first frames in experienced transmissions after a past transmission or a sum of packet lengths of all first frames in the experienced transmissions per a sum of packet lengths of NAK-ed first frames in the experienced transmissions, whichever is smaller, hence L is a measure of frame or block error rate and R is a means of taking weighted averages of past block error rates with current block error rates, hence is also a block error rate; Note: L is a block length) in a layered protocol communications system (col. 1, lines 15-31, Sato), comprising the steps of: opening and maintaining an information block flow by sending message blocks which are defined at a selected layer in the protocol stack below the topmost layer (col. 1, lines 15-31 in Sato teach that MAC protocol data units called "data frames" or simply "frames" are used to open and maintain information block flow by sending message blocks which are defined at a the

MAC protocol data layer in the protocol stack below the topmost layer; Note: the data link layer at which the MAC protocol data layer resides is well below the topmost application layer in the networking protocol stack); monitoring ack/nack messages sent in response to the message blocks to determine whether the message blocks have been correctly transported (col. 18, lines 10-28 in Sato teach that ack/nack messages sent in response to the message blocks to determine whether the message blocks have been correctly transported are monitored to determine the block error rate; see Figure 11 in Sato, also); and calculating said block error rate measurements based at least in part on the monitored ack/nack messages. (col. 18, lines 10-28, Sato; Note: in the equation $R = Ax^\alpha + C$, C is defined as β/L where L is a sum of packet lengths of ACK-ed first frames in experienced transmissions after a past transmission or a sum of packet lengths of all first frames in the experienced transmissions per a sum of packet lengths of NAK-ed first frames in the experienced transmissions, whichever is smaller, hence L is a measure of frame or block error rate and R is a means of taking weighted averages of past; Note: col. 18, lines 20-25 in Sato teach L is a sum of packet lengths of ACK-ed first frames in experienced transmissions after a past transmission or a sum of packet lengths of all first frames in the experienced transmissions per a sum of packet lengths of NAK-ed first frames in the experienced transmissions, whichever is smaller). In addition, Sato teaches that the LAN system conforms to an authorized protocol standard such as OSI (see col. 13, lines 18-21 and col.1, lines 15-31 in Sato). The Examiner asserts that GPRS and GSM are a 7 layer OSI protocol stack as taught in the Sato patent using MAC sub layer protocol services at the data link layer as taught in the

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Sato patent, hence the Sato patent is inherently capable of being in a protocol stack of the GPRS layered protocol communication system. See also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971) and *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

However Sato does not explicitly teach the specific use of opening and maintaining an information block flow by sending **repeated** message blocks which are defined at a selected layer in the protocol stack below the topmost layer.

Ejzak, in an analogous art, teaches opening and maintaining an information block flow by sending **repeated** message blocks which are defined at a selected layer in the protocol stack below the topmost layer (see Abstract, Ejzak).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sato with the teachings of Ejzak by including use of opening and maintaining an information block flow by sending **repeated** message blocks which are defined at a selected layer in the protocol stack below the topmost layer. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of opening and maintaining an information block flow by sending **repeated** message blocks which are defined at a selected layer in the protocol stack below the topmost layer would have provided the opportunity to increase throughput (see col. 1, lines 34-42 in Ejzak).

35 U.S.C. 103(a) rejection of claims 18 and 19.

MPEP § 2131.01(III) teaches Extra Reference or Evidence Can Be Used To Show an Inherent Characteristic of the Thing Taught by the Primary Reference

“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” Continental Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). The Examiner introduces Matsunaga, Yasuhiko et al. (US 6532233 B1, hereafter referred to as Matsunaga) and Reference 1 (http://www.webopedia.com/quick_ref/OSI_Layers.asp, The 7 Layers of the OSI Model) as a teaching references. Note: the Matsunaga patent and Reference 1 are **not** being introduced as Prior Art references, but are being introduced as teaching references for that which is inherent in the art. Sato teaches MAC protocol which exists in the data link layer along with the logical link layer (see Figure 2 in Sato and Reference 1). Note in col. 5, lines 7-15, Matsunaga teaches that it is a function of a layer-2 protocol, i.e., a data link layer protocol, called the Logical Link Control (LLC) layer to discard erred framed, hence error detection code is a predetermined characteristic that causes the message blocks to be discarded upon processing at a selected protocol layer, the data link layer protocol, in a communications unit receiving the message blocks.

Note: a header without a message block or with an invalid FCS is an erroneous data package.

4. Claims 3-8, 11-16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato, Tsuyoshi (US 5592468 A) and Ejzak; Richard P. et al. (US 5444718 A, hereafter referred to as Ejzak) in view of Decker, Peter (US 5946320 A).

35 U.S.C. 103(a) rejection of claims 3 and 11.

Sato and Ejzak, substantially teach the claimed invention described in claims 1, 2, 9 and 10 (as rejected above).

However Sato and Ejzak, does not explicitly teach the communications system is a general packet radio service (GPRS) and the selected protocol layer is a GPRS mobility management layer.

Decker, in an analogous art, teaches general packet radio services (GPRS) and that the selected protocol layer is the GPRS mobility management layer, GSM. The Examiner asserts that GPRS and GSM are a 7 layer OSI protocol stack as taught in the Sato patent using MAC sub layer protocol services at the data link layer as taught in the Sato patent. Col. 4, lines 24-48 in Decker teach that BER measurement are required, hence one of ordinary skill in the art at the time the invention was made would be highly motivated to combine the Decker and Sato patents to provide a means for computing BER in the Decker patent (Note: Bit Error Rate BER can be calculated from block error rate BLER with the obvious formula $BER = \text{bits/block} \times BLER$ where $\alpha = \beta = \frac{1}{2}$ in $R = A\alpha + \beta/L$, that is $R=BLER$).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sato and Ejzak with the teachings of Decker by implementing the teachings of Sato in a communications system that is a general packet radio service (GPRS) and the selected protocol layer is a GPRS mobility management layer. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that implementing the teachings of Sato in a communications system that is a general packet radio service (GPRS) and the selected protocol layer is a GPRS mobility management layer would have provided the opportunity for computing the required BER in the Decker patent.

35 U.S.C. 103(a) rejection of claims 4 and 12.

The Applicant admits that GMM_INFORMATION message blocks are part of the selected protocol layer is the GPRS mobility management layer, GSM, as taught in Decker (see rejection to claim 3 and lines 1-3 of page 4 of the Applicant's disclosure).

35 U.S.C. 103(a) rejection of claim 5.

Lines 4-9 on page 4 of the Applicant's disclosure teach each information element of the GMM_INFORMATION message (other than the header) is optional, hence it would be obvious to send a GMM_INFORMATION message in the absence of a message block or any information elements other than a message header.

35 U.S.C. 103(a) rejection of claim 6, 13, 14 and 16.

MPEP § 2131.01(III) teaches Extra Reference or Evidence Can Be Used To Show an Inherent Characteristic of the Thing Taught by the Primary Reference

“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” Continental Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). The Examiner introduces Matsunaga, Yasuhiko et al. (US 6532233 B1, hereafter referred to as Matsunaga) and Reference 1 (http://www.webopedia.com/quick_ref/OSI_Layers.asp, The 7 Layers of the OSI Model) as a teaching references. Note: the Matsunaga patent and Reference 1 are **not** being introduced as Prior Art references, but are being introduced as teaching references for that which is inherent in the art. Sato teaches MAC protocol which exists in the data link layer along with the logical link layer (see Figure 2 in Sato and Reference 1). Note in col. 5, lines 7-15, Matsunaga teaches that it is a function of a layer-2 protocol, i.e., a data link layer protocol, called the Logical Link Control (LLC) layer to discard erred framed, hence error detection code is a predetermined characteristic that causes the message blocks to be discarded upon processing at a selected protocol layer, the data link layer protocol, in a communications unit receiving the message blocks.

Hence, Decker teaches the communications system is a general packet radio service (GPRS) and the selected protocol layer is a GPRS logical link control layer.

Note: a header without a message block or with an invalid FCS is an erroneous data package.

35 U.S.C. 103(a) rejection of claims 7 and 15.

The Applicant admits that GRR_DATA_REQ message blocks are part of the selected protocol layer is the GPRS mobility management layer, GSM, as taught in Decker (see rejection to claim 3 and lines 16-32 of page 4 of the Applicant's disclosure).

35 U.S.C. 103(a) rejection of claim 8.

Inclusion in a message block of an invalid frame check sequence would inherently cause the message block to be discarded at the LLC layer (see rejection to claims 2 and 6, above).

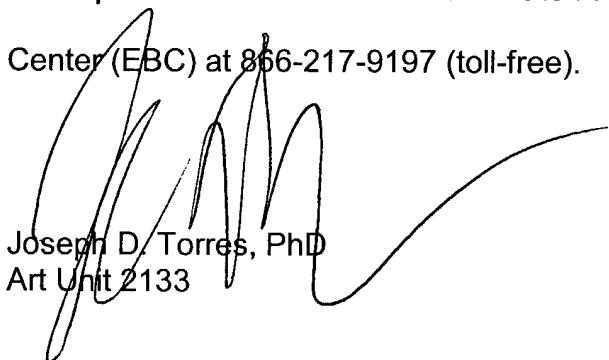
Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heiskari; Mika et al. (US 5901342 A) teaches establishing a call in a mobile communications system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (703) 308-7066. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph D. Torres, PhD
Art Unit 2133